1/2 033 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--COERCIVE FORCE AND STRUCTURE OF AN IRON PLATINUM ALLOY -U-

AUTHOR-(05)-MAGAT, L.M., IVANOVA, G.V., SOLINA, L.V., SHCHEGOLEVA, N.N., SHUR, YA.S.
COUNTRY OF INFO--USSR

SOURCE--FIZ. METAL METALLOVED. 1970, 29(2), 400-3

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--IRON ALLOY, PLATINUM CONTAINING ALLOY, METAL MICROSTRUCTURE, MAGNETIC COERCIVE FORCE, MAGNETIC ANISOTROPY, CRYSTALLOGRAPHY, PLASTIC DEFORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0337 STEP NO--UR/0126/70/029/002/0400/0403

CIRC ACCESSION NO--AP0126093

UNCLASSIFIED

2/2 033 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0126093
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRUCTURE WAS STUDIED FOR FE,PT ALLOYS WITH A HIGH COERCIVE FORCE. THE EFFECT WAS STUDIED OF PLASTIC DEFORMATION AND TEMPERING ON THE COERCIVE FORCE. IN A 1:1 ALLOY, THE MAX. COERCIVE FORCE OCCURRED IN THE SINGLE PHASE ORDERED STATE. THE SIZE OF THE TETRAGONAL PHASE CRYSTALLITES (FOR A MAGNETIC, CRYSTALLOGRAPHIC, ANISOTROPY CONST. OF THE ORDER OF 10 PRIME7 ERGS-CM PRIME3) IS THE MAIN FACTOR DETG. THE VALUE OF THE COERCIVE FORCE.
FACILITY: INST. FIZ. METAL., SVERDLOVSK, USSR.

UNCLASSIFIED

USSR

UDC: 543.812.2:547.312.2/.3

STARSHOV, I. M., IVANOVA, G. Ya.

"Determination of Small Quantities of Moisture (5-30 ppm) in Ethylene and Propylene"

Tr. Metrol. In-tov SSSR [Works of Metrological Institutes, USSR], 1972, No 136(196), pp 50-54 (Translated from Referativnyy Zhurnal Metrologiya i Izmeritel'naya Tekhnika, No 12, 1972, Abstract No 12.32.1160).

Translation: Comparative data are presented on the results of measurement of the moisture content of ethylene by the method of Fischer and the method of reaction gas chromatography. The mechanism of the interaction of calcium carbide with water is studied and it is established that with moisture contents of up to $25 \cdot 10^{-6}$, the reaction of water with calcium carbide results in the formation of CaO, while with moisture contents of over $25 \cdot 10^{-6}$, $Ca(OH)_2$ is formed. The optimal mode of operation of a carbide reactor is experimentally determined: length 200 mm, diameter 15 mm, flow rate of ethylene through reactor 60 ml/min. The content of moisture in the ethylene was determined from the quantity of acetylene liberated. It is indicated that, on the basis of the studies performed, the method of reaction gas chromatography can be used for analysis of the moisture content of ethylene with moisture contents of $5 \cdot 10^{-6}$ and higher. 4 figures, 2 tables, 6 biblio. refs.

1/1

USSR

UDC 513.88:513.83

IVANOVA, G. Ya.

"Certain Properties of Ideals of a Generalized Semiordered Ring of Extended Functions on a Bicompactum With a Complete System of Partial Multiplication Identities"

Uch. zap. Leningr. gos. ped. in-t im. A. I. Gertsena (Scientific Notes of the Leningrad State Pedagogical Institute imeni A. I. Hertzen), No 357, 1970, pp 71-91 (from Referativnyy Zhurnal -- Matematika, No 7, July 71, Abstract No 7B639, by G. Rotkovich)

Translation: A study was made of a generalized semiordered ring of extended functions on a compactum with a complete set of partial multiplication identities associated with the realization, in the B. Z. Vulikh sense, of an Archimidean interiorly normal K-lineal without a unit that is complete as to (b)-convergence. Certain properties of the ideals of such rings are established; some of these properties were known earlier for rings with a unit.

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1/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--FAGOPYRUM EMARGINATUM AS A NEW POTENTIAL SOURCE OF RUTIN -U-

AUTHOR-(02)-GRINKEVICH, N.I., IVANOVA, I.A.

COUNTRY OF INFO--USSR

SOURCE--FARMATSIYA (MOSCOW) 1970, 19(1), 32-7

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROCESSED PLANT PRODUCT, GLUCOSIDE, KETONE, PAPER CHROMATOGRAPHY, CHEMICAL IDENTIFICATION, COPPER SULFATE, PLANT PHYSIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3007/2022 STEP NO--UR/0466/70/019/001/0032/0037

CIRC ACCESSION NO--AP0137197

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201120018-4"

2/2 011 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0137197
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. USING MEOH EXTN. AND PAPER CHROMATOG. THE COMPN. OF F. EMARGINATUM WAS STUDIED AND FOUND TO BE THE SAME AS THAT OF SOWN BUCKWHEAT. THE ONLY DIFFERENCE WAS A HIGHER AMT. OF RUTIN AND CYANIDIN IN F. EMARGINATUM. THE HIGHEST CONTENT OF BOTH COMPDS. WAS FOUND IN THE FLOWERING PHASE. USING QUANT. SPECTRUM ANAL. THE PRESENCE OF P VITAMIN AND SOME HEMATOPOIETIC TRACE ELEMENTS, ESP. CU, WAS DETECTED. TREATMENT OF BUCKWHEAT PLANTS WITH CUSO SUB4, MNSO SUB4, CO(NO SUB3)SUB2 OR AMMONIUM MOLYBDATE INCREASED RUTIN AND CYANIDIN CONTENT. THE BEST RESULTS WERE ACHIEVED WITH CUSO SUB4 WHICH INCREASED RUTIN LEVEL AT 49.9 OR 48PERCENT AND CYANIDIUM LEVEL AT 53 OR 55PERCENT IN DIPLOID OR TETRAPLOID PLANTS RESP. FACILITY: MOSK. MED. INST. IM. SECHENOVA, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201120018-4"

1/2 010 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--PREPARATION OF DIHYDRIC PHENOLS BY CATALYTIC OXIDATION OF PHENOL IN AQUEOUS SOLUTIONS -U-

AUTHOR-(04)-MAKALETS, B.I., IVANOVA, I.G., PANKRATOVA, K.G., KIRICHENKO, G.S.

COUNTRY OF INFO--USSR

SOURCE--NEFTEPERERAB. NEFTEKHIM. MOSCOW 1970, (2), 23-5

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHENOL, CATALYTIC OXIDATION, DISTILLATION, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0566 STEP NO--UR/0318/70/000/002/0023/0025

CIRC ACCESSION NO--AP0119484

UNCLASSIFIED

2/2 010 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119484

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONTINUOUS CATALYTIC OXIDN. OF PHOH IN AQ. SOLN. YIELDED A MIXT. OF 1,2- (I) AND 1,4- C SUB6 H SUB4 (OH) SUB2 (II). THE OXIDATE WAS CONCD. WITH SIMULTANEOUS AZEOTROPIC DISTN. OF PHOH IN N, FOLLOWED BY EXTN. OF I AND II WITH ETOAC AND DIISOPROPYL ESTER AS SELECTIVE SOLVENTS. THE MAX. YIELD OF 70-5PERCENT I PLUS II WAS OBTAINED AT PH 3-5 AND 30 ATM WITH 5-15PERCENT PHOH SOLN. AND 0.01-0.03 MOLE PERCENT CUCL SUB2 AS CATALYST, BASED ON PHOH. II FORMATION WAS PREDOMINANT, THE CONVERSION OF PHOH BEING 20-5PERCENT.

FACILITY: NOVOKUIBYSHEVSK. FILIAL NIISS, NOVOKUIBYSHEVSK, USSR.

UNCLASSIFIED

1/2 033 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--EFFECT OF DIFFUSION PROCESSES ON THE SINTERING OF METAL POWDERS. II. ROLE OF DIFFUSION PROCESSES IN THE ACTIVATION OF SINTERING -U-
AUTHOR-(03)-FEDORCHENKO, I.M., IVANOVA, I.I., FUSHCHICH, O.I.

COUNTRY OF INFO--USSR

SOURCE--PORoshkovaya Met., Feb. 1970, (2), 14-18

DATE PUBLISHED----FEB70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--NICKEL, COBALT, COPPER, PHYSICAL DIFFUSION, POWDER METALLURGY, IRON POWDER, SINTERED METAL, THERMODYNAMICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0127 STEP NO--UR/0226/70/000/002/0014/0018

CIRC ACCESSION NO--AP0123899
UNCLASSIFIED

2/2 033 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0123899

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CF. IBID., (1), 30; MET. A., 7006-54 0138. THE ACTIVATION OF SINTERING PROCESSES IN FE POWDER CONTG. TRACES OF NI, CO, AND CU WAS STUDIED WITH SPECIAL REF. TO THE PART PLAYED BY THE MUTUAL DIFFUSION OF THE CONSTITUTENTS. THE ACTIVATION OF THE SINTERING PROCESS NORMALLY OBSERVED AFTER INTRODUCING TRACES OF OTHER METALS WAS ATTRIBUTED TO THE INTERACTION OF THE ASSOCIATED STRUCTURAL DEFECTS, WHICH FACILITATED DIFFUSIVE CREEP IN THE METAL. THE ACTUAL DIRECTION OF THE DIFFUSIVE FLOW BETWEEN THE PARENT METAL AND THE ADDITIVES WAS PRACTICALLY IMMATERIAL AS REGARDS ACTIVATION. ACTIVATION WAS PARTLY DUE TO THE THERMODYNAMIC INSTABILITY OF THE ADDITIVE IN THE COURSE OF SINTERING AND PARTLY TO THE CREATION OF STRUCTURAL DEFECTS BY THE SINTERING PROCESS ITSELF.

UNCLASSIFIED

USSR

FEDORCHENKO, I. M., IVANOVA, I. I., and FUSHCHICH, O. I., Institute for Problems of Material Science, Academy of Science, Ukr SSR

"Investigation of the Effect of Diffusion Processes on the Sintering of Metal Powders"

Kiev, Academy of Sciences Ukr SSR, Poroshkovaya Metallurgiya, No 1, Jan 70, pp 30-36

Abstract: The effect of diffusion processes on the sintering of metal powders was investigated in order to establish 1) the possibility of evaluating the diffusion processes by the diffusion constants determined on nonporous cast metals, and 2) the dependence of the intensity of diffusion processes on the distortion of crystal lattices of powder metals. Diffusion coefficients were measured on Fe-Co and Fe-Cu powdery systems at 850,1200° and 350,1000°C, respectively, using the method of microspectral analysis. Since the diffusion processes in metals depend to a large extent on the presence of distortion of the crystal lattice and structure defects, experiments to study the penetration of copper into iron were conducted on samples with different degrees of structural irregularities resulting from cold hardening. Curves of the diffusion penetration of copper

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USSR

FEDORCHENKO, I. M. et al, Poroshkovaya Metallurgiya, No 1, Jan 70, pp 30-36

into iron for samples with different initial states are presented. A method suggested by J. G. Fisher was used to determine the predominant diffusion mechanism. The roles of volume and boundary diffusion in both systems were ascertained. The intensity of diffusion processes in powder systems substantially exceeded the intensity in cast metals. Preliminary high-temperature annealing substantially decreased the diffusion coefficients in powdery systems, approximating them to those in cast metals. Because of the considerable intensity of boundary processes, mass transfer in powdery systems can be determined in some cases by the boundary diffusion. Diffusion coefficients for both powdery systems are presented in tables. Orig. art. has: 3 figures, 3 tables, and 5 references.

2/2

UDC 576.809.51

USSR

RABOTNOVA, I. L., and IVANOVA, I. I.

"Growth and Development of Microbial Cultures"

Uspekhi mikrobiologii (Advances in Microbiology), No 7, 1971,

Abstract: Quantitative and qualitative patterns of microbial growth are examined. A discussion is presented of the principles of mathematical expression of the growth rate of periodic and continuous cultures based on the kinetics of enzymatic reactions or on the use of methods of chemical kinetics of autocatalytic processes. It is noted that the use of mathematical models requires a knowledge of effects of the main prevailing conditions (pH, aeration, substrate concentration, and metabolic products). The most important growth constants -- g, m_{max}, k_s, y -- are characterized. The theory of two-phase development of microbial populations as a result of growth limitation by starvation or poisoning is explained. Data are presented on the adaptability of cultures. Principles of continuous culture and methods of predicting the behavior of cultures in shift from periodic to continuous cultivation are discussed. Information is given on change in cell composition in relation to cultivation conditions -- growth rate and nature of its limitation. Changes in the content of nuclei acids and their protein-synthesizing activity, content of carbohydrates and lipids are examined.

UDC 576.851.5.095

USSR

IVANOVA, I. L., SHAFOROSTOVA, L. D., RABOTNOVA, I. L., and SOTNIKOV, G. G., Institute of Microbiology, Academy of Sciences USSR, Moscow

"The Role of Catabolic and Anabolic Processes Associated With the Uneven Growch of Bacillus megatherium in the Exponential Phase of Growth"

Moscow, Mikrobiologiya, Vol 41, No 1, Jan/Feb 72, pp 64-67

Abstract: Bacillus megatherium was grown in a synthetic medium containing 0.3% sodium citrate as the only source of carbon. The activity of four enzymes was tested in the supernatant fluid after breaking the cells by ultrasound: pyruvate decarboxylase (PD), L-isocitric-$NADP^+$ dehydrogenase (ID), D-glucose-6-phosphate-$NADP^+$ dehydrogenase (G6D), and decarboxylase of oxalodiacetic acid (DOA). The production of CO_2 and the consumption of oxygen were tested in washed cell cultures and the level of adenosine 5-triphosphate (ATP) was tested in the extract from bacterial cells. During the first half of exponential growth, the anaerobic decomposition of citrate prevailed, whereas oxidative processes were characteristic for the second half. Each increase of growth was preceded by an increase in ATP concentration. DOA activity was maximal in the first part of growth, when no activity of ID could be detected. ID activity appeared and increased after 3 hours of growth,

USSR

IVANOVA, I. I., et al., Mikrobiologiya, Vol 41, No 1, Jan/Feb 72, pp 64-67

when DOA activity decreased. The activity of both PD and G6D increased during growth with their maximum before the second growth peak was reached. The decrease of activity at the time of the second peak was typical for all four enzymes tested. The uneven growth rate during the exponential phase was due to the intracellular regulation of catabolic and anabolic processes. The monophosphate and glycolytic pathways were apparently involved in the anabolic processes in Bac. megatherium.

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USSR

UDC 542.91

SHAFORCSTOVA, L. D., IVANOVA, L. I., and RABOTNOVA, I. L., Institute of Microbiology, Academy of Science USSR

"Change in Chemical Composition of Cells Because of Uneven Growth in the Exponential Phase of a Periodic Bac. megatherium Culture"

Moscow, Doklady Akademii Nauk SSSR, No 6, 1971, pp 1,449-1,451

Abstract: Fluctuations in the growth rate of Bac. megatherium cultured on a synthetic medium were accompanied by changes in the content of the main cell polymers. DNA was the most stable polymer. The RNA content increased parallel to the growth rate and was described by a two-peak curve. The dynamics of the protein content differed from that of the RNA. At the time of an acceleration of the growth rate, the amount of protein decreased before the first peak and increased before the second. Before the end of the exponential phase, the dynamics of the polysaccharide content was the same as that of protein synthesis. The polysaccharides decreased significantly in the periods of accelerated growth (between the first and second peaks). When the culture entered the stationary phase, the polysaccharides again began to increase. The synthesis of lipids and polu- β -hydroxybutyric acid also proceeded unevenly. The lipid content was highest after the first

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USSR

SHAFOROSTOVA, et al., Doklady Akademii Nauk SSSR, No 6, 1971, pp 1,449-1,451

peak and before the second. At the start of growth, citric acid was consumed most intensively, resulting in the release of acetic, pyruvic, and α-keto-glutaric acids. The amount of acids in the medium per unit of biomass was highest at this time. Thus, the exponential phase of Bac. megatherium growth is a multistage process characterized by a definite sequence of synthesis and consumption of the main cell polymers.

Acc. Nr: AP0049308 Abstracting Service: CHEMICAL ABST. 5-76 Ref. Code: 4R 0226

103158y Effect of diffusion processes on the sintering of metal powders. I. Fedorchenko, I. M.; Ivanova, L. I.; Pishchich, O. I. (Inst. Probl. Materialoved., Kiev, USSR). *Poroshk. Met.* 1970, 10(1), 30–6 (Russ). The diffusion processes in powd. bodies were studied with respect to the diffusion consts. as detd. for pore-free cast metals. The dependence of the intensity of the diffusion processes was studied with respect to the degree of distortion of the cryst. lattice of the powd. bodies. The diffusion coeffs. of powd. Fe-Co and Fe-Cu systems were detd. at temps. of 850, 1200, and 850 and 1000°, resp. Microspectral anal. was used for this work. The intensity of the diffusion processes depends significantly on the degree of distortion of the cryst. lattice of the powders and on the metal deformation during pressing. Because of the considerable activity of the boundary processes, the transfer of the material in the powdery systems can be detd. in some cases by boundary diffusion. S. A. Mersol

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REEL/FRAME
19801125

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USSR

UDC 616.988.25-022.395.42-09:.5

NIKOLAYEVA, S. P., VERETA, L. A., and IVANOVA, I. P., Department of Natural Focal Infections, Khabarovsk Scientific Research Institute of Epidemiology and Microbiology

"Duration of Antibody Preservation and Their Relationship to Gamma- and Beta-Globulin Fractions in Blood Serum of Individuals Who Had Suffered Various Forms of Tick-Borne Encephalitis"

Moscow, Zhurnal Nevropatologii i Psikhiatrii imeni S. S. Korsakov, Vol 73, Vyp 2, 1973, pp 188-191

Abstract: Immunological tests were made on blood sera of 68 individuals who had suffered various forms of tick-borne encephalitis (meningeal, focal, obliterative) 1-7 years prior to the study to determine antibody persistence. Complement-fixing antibodies were found to persist 1-3 years at a uniform level, after which time they disappeared, and were more frequently encountered with the obliterative form. Antihemagglutinins and virus-neutralizing antibodies persisted beyond the time of observation irrespective of the form of disease. In early stages (6 months to 1 year) all of these elements were detected in both gamma- and beta-globulin fractions. After 2-7 years complement-fixing antibodies were not detected, while antihemagglutinins and virus-neutralizing antibodies were encountered most frequently in the gamma-globulin fraction.
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USSR UDC 620.197.1.001.5

IVANOVA, I. P., Candidate of Technical Sciences, and SVISTUNOVA, L. A., Engineer, All Union Thermotechnical Institute

"Corrosion of 12KhlMF Steel and Various Anticorrosion Coatings in a Smoke Gas Medium From the Burning of Anthracite"

Moscow, Teploenergetika, No 1, Jan 71, pp 60-63

Abstract: An experimental investigation was made of a mechanism of the effect of fuel gas on 12KhiMF steel samples and on various anticorrosion coatings. The purpose of the investigation was to determine 1) the corrosion properties of the fuel gas in relation to its composition; 2) the effect of metal temperature on the corrosion rate, and 3) the efficiency of various anti-corrosion coatings in the burning of anthracite. Tests were conducted on steel samples and metallic coatings at 310 to 520°C, with constant fuel gas composition. A systematic analysis of the fuel gas during the tests showed a clear relationship between hydrogen sulfide concentration and the carbon monoxide content in the fuel gas. The dependence of steel corrosion rate on hydrogen sulfide at 500°C and on temperature is shown in graphs. The results show that 1) the corrosion rate increases proportion-

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USSR

IVANOVA, I. P., and SVISTUNOVA, L. A., Teploenergetika, No 1, Jan 71, pp 60-63

ally to hydrogen sulfide concentration; 2) that its content in gaseous anthracite combustion products increases proportionally to the degree of fuel gas reduction; 3) that coatings containing free nickel are unsuitable for high-temperature corrosion protection, and 4) that the technology of Al-type coatings must be improved.

2/2

USSR UDC: 669.293.5

SAVITSKIY, Ye. M., IVANOVA, K. N.

"Study of the Phase Structure of Niobium-Based Alloys in the System Niobium-Tungsten-Zirconium-Carbon"

Moscow, Atomnaya Energiya, Vol 34, No 2, Feb 73, pp 89-92.

Abstract: This work studies the phase structure of alloys in the system niobium-tungsten-zirconium-carbon, rich in niobium and containing up to 4 at. % zirconium and 2 at. % carbon with a constant content of 10 at. % (18 wt. %) tungsten. The solubility of carbon in the niobium-based alloys is determined at 1800° C, one of the most probable temperatures of hardening heat treatment of these alloys with dispersion hardening.

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USSR UDC 537.533.35

IVANOVA, K. N., PALETOV, A. M., SAVITSKIY, YE. M., and IGNATOV, D. V.

"Nature and Distribution Characteristics of Carbide Phases in Aged Niobium Alloys as Revealed by Electron Microscopy"

Moscow, Fizika i Khimiya Obrabotki Materialov, No 1, Jan/Feb 73, pp 106-111

Abstract: Aging of RN-6S alloy (5% W, 5% Mo, 1% Zr, and 0.1% wt% C) at 1000°C for 5 hours produced mainly Nb_2C with an hexagonal crystal lattice and zirconium carbide which upon closer examination under the electron microscope appeared as (Zr,Nb)C with a face-centered cubic lattice. When aging at 1000°C was increased to 25 hours, more (Zr,Nb)C phase was formed as laminar inclusions with a well defined orientation in the matrix and to some extent along the grain boundaries. Aging at 1100°C for 25 hours produced more oriented inclusions of the (Ar,Nb)C phase while the large particles of the Nb_2C phase remained along the grain bounderies. When aging at 1100°C was extended to 50 hours, Nb_2C inclusions disappeared almost completely from the grain boundaries while the (Zr,Nb)C phase coagulated along the grain volume and its dispersed inclusions coagulated along the grain boundaries. A further coagulation of the (Zr,Nb)C phase and its nonuniform distribution was observed in the same alloy aged at 1100°C for 100 hours. Only an insignificant amount of the Nb_2C

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USSR

IVANOVA, K. N., et al, Moscow, Fizika i Khimiya Obrabotki Materialov, No 1, Jan/Feb 73, pp 106-111

phase was left in this case. The observed structural changes in the RN-6S alloy produced by aging resulted in changes of the mechanical properties at room temperatures. The appearance of the (Zr,Nb)C phase increased the alloy strength and the yield point, while coagulation of this phase decreased these properties. Formation of inclusions along grain boundaries free from carbides after aging at 1100°C for 25 hours decreased somewhat the plasticity of the alloy compared with the hardened state. Lead quenching of the RN-6S alloy from 2000°C after 3 hour exposure at this temperature showed that the Nb_2C phase is much more stable at 1700°C, while the (Zr,Nb)C phase is more stable at 1000-1100°C.

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ELECTRICAL ENGINEERING

Materials

USSR

UDC 621.385.032.213.6

SAVITSKIY, YE. M., MOROZOV, A. V., IVANOVA, K. N., BELOUSOV, A. I., BARON, V. V., ROZHDESTVENSKIY, V. M., OVCHINNIKOV, M. A.

"Alloy for Manufacturing the Parts of the Cathode Junction of Electronic Devices"

USSR Author's Certificate No 304642, filed 14 August 1969, published 25 May 1971 (from Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 17, 1971, No H 01j 1/20)

Translation: 1. An alloy for manufacturing the parts of the cathode junction of electronic devices based on niobium is introduced. It is distinguished by the fact that in order to improve strength and stability of shape of the parts, the alloy contains tungsten and zirconium additives.

2. The alloy according to item 1 distinguished by the fact that it contains 7-9% tungsten and 2-2.5% zirconium is introduced.

3. The alloy according to item 1 distinguished by the fact that it contains molybdenum is introduced.

4. The alloy according to item 3 distinguished by the fact that it contains 5-7% tungsten, 1-1.5% zirconium and 4-6% molybdenum is introduced.

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USSR UDC: 577.4

ZYABLOV, V. V., AFANAS'YEV, V. B., IVANOVA, L. A., SHUTIKOV, I. V.

"Results of Modeling Three-Dimensional Codes With Error Localization"

Moscow, V sb. Peredacha diskret. soobshch. po kanalam s gruppiruyushchimisya oshibkami (Transmission of Discrete Information Along Channels With Grouped Errors--collection of works) "Nauka," 1972, pp 47-52 (from RZh--Matematika, No 7, 1972, Abstract No 7V456)

Translation: The results are given of the use of electronic digital computers for modeling decoding procedures for three-dimensional iterative codes used for the transmission of digital information in standard telephone channels. Records of errors for four different channels are used in channel modeling. The results obtained permit evaluations of the limiting possibilities for the codes and of the effect of the structure, length, and redundancy on the probability of erasure and wrong decoding of the information. Experimental verification has shown that the modeled variants of the three-dimensional codes are only slightly inferior to cascade codes of the same length and redundancy with regard to the probability of erasure. Authors' abstract

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USSR UDC 577.4

ZYABLOV, V. V., AFANAS'YEV, V. B., IVANOVA, L. A., SHUTIKOV, I. V.

"Results of Simulation of Three-Dimensional Codes with Error Localization"

V sb. Peredacha diskret. soobshch. po kanalam s gruppiruyushchimisya oshibkami (Transmission of Digital Messages over Channels with Group Errors -- collection of works), Moscow, Nauka Press, 1972, pp 47-52 (from RZh-Kibernetika, No 7, Jul 72, Abstract No 7V456)

Translation: Results are presented from simulating procedures on a digital computer for decoding three-dimensional iterated codes used to transmit the digital data in standard telephone channels. Error recordings for four different channels were used as the chanel model. The results obtained permit us to estimate the limiting possibilities for the investigated codes and the effect of the structure, length and redundancy on the erasure probability and the probabilities of erroneous decoding of the messages. An experimental check demonstrated that the modulated versions of the three-dimensional codes are insignificantly inferior with respect to the probability of erasure to cascade codes of the same length and redundancy.

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UDC 616.988.75-053.2

USSR

CHESHIK, S. G., RODOV, M. N., IVANOVA, L. A., ZAYTSEVA, N. D., and KEONDZHAN, S. YE., Clinical Department, Institute of Virology imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences, and City Clinical Hospital of Infectious Diseases No 82, Moscow

"Clinical Picture and Diagnosis of Hong-Kong A2 Influenza in Children"

Moscow, Pediatriya, No 5, May 71, pp 92-93

Abstract: During the peak of the Hong-Kong A2 influenza epidemic in 1969, the frequency of acute respiratory diseases increased 8.4 times among adults, 7.9 times among children aged 7-14, and only 2.4 times among children aged up to 2 years. Nevertheless, in absolute figures, the frequency was highest in the last group, because the pre-epidemic morbidity among small children was very great. Serological and fluorescent antibody tests performed on hospitalized patients in December 1968 through March 1969 revealed that all respiratory diseases identified in the pre-epidemic period were also diagnosed during the epidemic, though their relative proportions were somewhat smaller: 28.3% in December, 25.4% in January, and 10.4% in February. This makes it necessary to perform differential diagnoses of viral respiratory diseases in hospitals in order to distribute the patient in proper wards. Of the 122 children hospitalized with diagnosed influenza, 74 developed complications:

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201120018-4"

USSR

CHESHIK, S. G., et al., Pediatriya, No 5, May 71, pp 92-93

45 developed pneumonia, 9 developed bronchitis, and 20 developed other diseases. Among infants, toxicosis was less pronounced which developed in 47% of infants up to the age of 1 year and in 73% of infants aged up to 3 months. Among the youngest infants, pneumonia often developed suddenly and progressed with a fatal speed. Therefore, it is necessary to hospitalize these children regardless of the severity of the influenza.

2/2

1/3 037 UNCLASSIFIED PROCESSING DATE--09OCT70

TITLE--DETERMINING ABSORPTION OF EXPLOSIVE WAVES IN GROUND FROM RECORDS OF STRESSES AND STRAINS -U-

AUTHOR-(03)-IVANOVA, L.A., KONDRATYEVA, T.G., SCHERBO, M.N.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, IZVESTIYA AKADEMII NAUK SSSR, FIZIKA ZEMLI, NO 2, 1970, PP 21-29

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--STRESS ANALYSIS, STRAIN, LONGITUDINAL WAVE, SEISMIC WAVE, WAVE AMPLITUDE, EARTH CRUST DEFORMATION, DEFORMATION RATE, WAVE PROPAGATION, EXPLOSION, ELASTICITY, ABSORPTION COEFFICIENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1991/0727 STEP NO--UR/0387/70/000/002/0021/0029

CIRC ACCESSION NO--AP0110455

UNCLASSIFIED

2/3 037 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0110455

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHORS HAVE DEVELOPED APPARATUS AND A METHOD FOR THE DIRECT REGISTRY OF THE NORMAL COMPONENTS OF STRESSES SIGMA SUBXX (T) AND STRAINS E SUBXX (T) IN REAL MEDIA; IT IS POSSIBLE TO DETERMINE THE ENERGY LOSS IN THE MEDIUM IN THE PROPAGATION OF AN EXPLOSIVE WAVE CAUSED BY IMPERFECT MEDIUM ELASTICITY. THE ENERGY LOSSES DUE TO IMPERFECT ELASTICITY WERE DETERMINED IN THE UPPER PART OF THE GROUND FROM THE HYSTERESIS LOOP FORMED BY THE DEPENDENCE OF STRESS ON STRAIN, REGISTERED AT ONE POINT OF THE GROUND. THE RESULTS OF DETERMINATION OF THE RELATIVE LOSSES AND THEIR COMPARISON WITH RESIDUAL GROUND DEFORMATIONS FOR DIFFERENT E SUBXX MADE POSSIBLE A CLEAR DISCRIMINATION OF A REGION OF LARGE DEFORMATIONS (E SUBXX GREATER THAN 10 PRIME NEGATIVE3) OF THE GROUND AND A REGION OF SMALL DEFORMATIONS (E SUBXX SMALLER THAN 10 PRIME NEGATIVE3). IN THE REGION OF LARGE DEFORMATIONS THE RELATIVE ENERGY LOSS DELTA W-W IS DEPENDENT ON THE AMPLITUDE OF THE DEFORMATIONS; THE RATIO DELTA W-W INCREASES WITH AN INCREASE IN E SUBXX AND WHEN E SUBXX APPROXIMATELY EQUAL TO 10 PRIME NEGATIVE2 THE LOSSES EXCEED BY SEVERAL TIMES THE ENERGY OF ELASTIC DEFORMATION. IN THIS SAME REGION THERE ARE RESIDUAL DEFORMATIONS OF THE GROUND WHOSE MAGNITUDE ALSO INCREASES WITH AN INCREASE IN E SUBXX. THIS INDICATES A RELATIONSHIP BETWEEN THE MECHANISM OF ENERGY LOSSES IN THE REGION OF LARGE DEFORMATIONS AND THE RESIDUAL DEFORMATIONS OF THE MEDIUM.

UNCLASSIFIED

3/3 037 UNCLASSIFIED PROCESSING DATE--09OCT70

CIRC ACCESSION NO--AP0110455

ABSTRACT/EXTRACT--FOR DEFORMATIONS E SUBXX SMALLER THAN 10 PRIME NEGATIVE3 THE GRAPH OF THE DEPENDENCE OF RELATIVE LOSSES ON E SUBXX IS REPRESENTED BY A HORIZONTAL ASYMPTOTE AND THE RATIO DELTA W-W ASSUMES A CONSTANT VALUE NOT DEPENDENT ON E SUBXX. RESIDUAL DEFORMATIONS ARE ABSENT, EVIDENCE OF A DIFFERENCE IN THE ABSORPTION MECHANISM DURING SMALL DEFORMATIONS, OBVIOUSLY NOT ASSOCIATED WITH RESIDUAL DEFORMATIONS, ON THE ABSORPTION MECHANISM FOR SMALL DEFORMATIONS. THUS, THE REGION OF VALUES E SUBXX APPROXIMATELY EQUAL TO 10 PRIME NEGATIVE3 IS THE BOUNDARY BETWEEN THE INELASTIC ZONE WHERE THE RELATIONSHIP BETWEEN SIGMA SUBXX AND E SUBXX IS NONLINEAR AND THE LINEARLY INELASTIC REGION WHERE A LINEAR DEPENDENCE EXISTS BETWEEN STRESSES AND STRAINS IN THE PRESENCE OF DEVIATIONS FROM IDEAL ELASTICITY. THE VALUE OF THE ABSORPTION COEFFICIENT IN GROUND, DETERMINED BY THE DIRECT METHOD IN THE LINEARLY INELASTIC ZONE, COINCIDES WITH THE ATTENUATION VALUES OF THE LONGITUDINAL SEISMIC WAVE IN SIMILAR ROCKS DETERMINED BY THE METHOD OF COMPARING WAVE AMPLITUDE AT DIFFERENT DISTANCES FROM A SOURCE. THIS AGREEMENT MAKES IT POSSIBLE TO ASSUME THAT IN SOFT GROUND WAVE ATTENUATION IS DETERMINED FOR THE MOST PART BY IMPERFECT MEDIUM ELASTICITY. FACILITY: INSTITUTE OF PHYSICS OF THE EARTH.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--ENHANCED ANTIMICROBIAL STABILITY OF OINTMENT BASES -U-

AUTHOR-(02)-IVANOVA, L.A., KONDRATYEVA, T.S.

CCUNTRY OF INFO--USSR

SOURCE--FARMATSIYA (MOSCOW) 1970, 10(1), 23-6

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TCPIC TAGS--BACTERICIDE, CHEMICAL STABILITY, PHARMACEUTICS, AMMONIUM CHLORIDE, BENZENE DERIVATIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1355 STEP NO--UR/0466/70/010/001/0023/0026

CIRC ACCESSION NO--AP0125003

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201120018-4"

2/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125003

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ANTIBACTERIAL ACTIVITY OF VARIOUS PRESERVATIVES WAS INVESTIGATED ON THE FOLLOWING OINTMENT BASES: PARAFFIN, OPTHALMIC BASE, EMULSION BASE AND HYDROPHILIC BASE. MICROORGANISMS (A 500,000 COUNT) WERE INTRODUCED AND BACTERIOLOGICAL EXAMNS. WERE PERFORMED AFTER 1, 3, 6, 24, AND 168 HR INCUBATION. WHEN THE PRESERVATIVES WERE INEFFECTIVE, ADDNL. EXAMNS. WERE PERFORMED AFTER 14, 30, AND 90 DAYS. THE EFFECTIVENESS OF THE PRESERVATIVES DEPENDS ON THE NATURE OF THE BASE: IN PARAFFIN AND OPTHALMIC OINTMENTS THEY ARE GENERALLY MORE EFFECTIVE THAN IN OTHER BASES. THE MOST ACTIVE PRESERVATIVES ARE DODECYLDIMETHYLBENZYLAMMONIUM CHLORIDE AT 1:10,000 DILN. AND 0.2PERCENT SORBIC ACID. FACILITY: MOSK. MED. INST. IM. SECHENOVA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 576.851.555.098.345.4

IVANOVA, L. G., BLAGOVESHCHENSKIY, V. A., and BULATOVA, T. I., Institute of Epidemiology and Microbiology imeni Gamaleya, USSR Academy of Medical Sciences, Moscow

"Carbohydrate Composition of Type A Cl. Botulinum Belonging to Different Serological Groups"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1973, pp 98-103

Abstract: Ion exchange column chromatography and paper chromatography were employed to investigate the carbohydrate composition of two serologic strains (98 and Memphis) of Cl. botulinum type A. Culture media did not have an effect on their carbohydrate composition and both strains contained glucose, gluconamine, ribose, [illegible], and Memphis differed from strain 98 in that it contained mannitol and a higher concentration of glucose and an unidentified neutral sugar than did strain 98.

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USSR UDC 576.851.553.098

SERGEYEVA, T. I., and IVANOVA, L. G., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR, Moscow

"Serological Groups Within Cl. botulinum Types A and B and Their Biochemical Properties"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 7, 1973, pp 131-136

Abstract: Cl. botulinum types A and B each has been shown to consist of a number of serological groups on the basis of agglutination, precipitation, and complement fixation reactions with antisera against the H antigens. In the present study group specific H antigens -- free of somatic O antigen -- were used to induce specific anti-H antisera. On the basis of capillary precipitation tests, Ouchterlony gel diffusion tests, and indirect immunofluorescence studies it became apparent that types A and B each consists of four serological groups. These groups could not readily be demonstrated by means of commercially available antitoxins or anti-H antisera because of extensive crossreactions, which sometimes extended to Cl. sporogenes and Cl. putrificus. Multivalent anti-H antisera could be prepared which would distinguish between Cl. botulinum types A and B in immunofluorescence

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SERGEYEVA, T. I., and IVANOVA, L. G., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 7, 1973, pp 131-136

tests, but would give a negative reaction with types C, E, and F, and with Cl. sporogenes and Cl. putrificus. The serological groups within type A could be distinguished on the basis of glycerin, galactose, and maltose fermentation. Those within type B could be distinguished on the basis of glycerin, sucrose, sorbitol, raffinose, lactose, mannitol, inulin, and maltose fermentation. The serological groups could not be distinguished on the basis of proteolytic properties when tested on ovalbumin, casein, gelatin, and litmus milk.

USSR

UDC 615.373:616.981.553-078.73

BULATOVA, T. I., IVANOVA, L. G., and MATVEYEV, K. I., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR

"The Use of Highly Specific Antibotulinus Sera to Detect Cl. botulinum Types A and B by the Fluorescent-Antibody Method"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1971, pp 101-106

Abstract: Inoculation of rabbits with O-type-specific antigen isolated from Cl. botulinum types A and B yielded highly specific sera suitable for detecting the microorganisms by the fluorescent antibody method in environmental objects. Study of pure cultures and over 150 samples of soil and food in which Cl. botulinum types A and B were detected both by the neutralization test in mice and by the indirect fluorescent antibody method confirmed the high specificity of the sera. Cl. botulinum was detected by the fluorescent antibody method in every one of the samples containing botulinus toxin.

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USSR

UDC 576.851.55.083.31

ZEMLYANITSKAYA, Ye. P., VINOGRADOVA, I. N., and IVANOVA, L. G., Institute of Epidemiology and Microbiology imeni N. F. Gamaleya; Academy of Medical Sciences USSR, Moscow

"The Use of Dry Media in the Diagnosis of Diseases Produced by Cl. oedematiens, Cl. septicum, Cl. histolyticum, and Cl. sordellii"

Moscow, Laboratornoye Delo, No 11, 1970, pp 681-683

Abstract: The effectiveness of bacteriological diagnosis of anaerobic infections is clearly dependent on the media used for culturing these microroganisms. Dry media which are suitable for transport and long-term storage and which are sufficiently simple to prepare appear to be most promising for this purpose. Dry acidic casein hydrolysate has been used for protein separation and for the preparation of anaerobic media. A nutrient broth of the casein hydrolysate was prepared and sterilized and, with other media, was used for culturing various bacteria. The activity of clostudial toxins was determined; specificity was monitored by neutralization with antitoxic specific standard sera. Comparative results of more than 200 tests are presented in tabular form, showing the toxin activity of the different bacterial strains in the various dry media tested.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201120018-4"

USSR UDC 576.851.553.093.31

PEROVA, YE. V., and IVANOVA, L. G., Institute of Epidemiology and Microbiology imeni Gamaleya, Academy of Medical Sciences USSR

"Changes in the Chemical Composition of Culture Media During Culturing and Toxin Formation by Cl. botulinum, Type F"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, Apr 71, pp 134-139

Abstract: Cl. botulinum type F, was grown on casein-fungus (casein hydrolyzed by Asperigillus terricola fungus, with 1% corn extract and 2% vitamin B complex added to the hydrolysate) and whale liver-yeast media. The strongly toxigenic strain No 470 of Cl. botulinum, type F, which was isolated in Denmark, and the weakly toxicogenic strain Ecland, which was isolated from the soil of the Pacific Coast of the US, were used. Proteolytic activity, as indicated by the content of amine N and peptone in the culture medium, was greater at the same amount of growth for strain No 470 than strain Ecland. The content of inorganic P in the medium increased to a greater extent on culturing of strain No 470 than that of strain Ecland. This was presumably due to a higher acid phosphatase activity of the more strongly toxigenic strain. In the experiments conducted, it was not possible to differentiate

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PEROVA, YE. V., and IVANOVA, L. G., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, Apr 71, pp 134-139

between alkaline phosphatase and adenosine triphosphatase activities. However, the alkaline phosphatase activity apparently was more pronounced in No 470 and the adenosine triphosphatase activity in strain Ecland. On growing strain No 470 on casein-fungus medium, a toxin activity of $4 \times 10^4 - 6 \times 10^4$ ID_{50} /ml towards white mice was obtained vs 2×10^4 ID_{50} /ml on culturing of the same strain in meat broth.

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UDC 547.26'118

USSR

PUDOVIK, A. N., PUDOVIK, M. A., and IVANOVA, L. K., Institute of Organic and Physical Chemistry Imeni A. Ye. Arbuzov, Acad. Sc. USSR

"Reactions of 1,3,2-Diazaphospholanes With Acyl Halides"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 9, Sep 72, pp 1906-1910

Abstract: A series of 2-substituted N,N-di-tert-butyl-1,3,2-diazaphospholanes was synthesized. It was shown that, depending on the substituent at the phosphorus atom of diazaphospholanes, the reactions with acyl halides may occur with retention or breaking of the ring, forming derivatives of 3- or 4-coordinated phosphorus atom. With an exocyclic dialkylamino group the principal reaction is the exchange reaction with retention of the ring. Introduction of an alkoxy group makes the phosphorus atom a nucleophilic center, and the reaction goes via the Arbuzov rearrangement. In case of the 2-phenoxy derivatives of diazophospholanes the reactions occur via one of the cyclic nitrogen atoms breaking the ring and forming derivatives of 3-coordinated phosphorus atom.

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USSR

UDC 547.26'118

PUDOVIK, A. N., PUDOVIK, M. A., IVANOVA, L. K., Institute of Organic and Physical Chemistry imeni A. YE. Arbuzov, Academy of Sciences USSR

"Reaction of 1,3,2-Oxazaphospholanes With Chloral"

Leningrad, Zhurnal Obshchey Khimii, Vol 41, No 10, 1971, pp 2180-2184

Abstract: The study of the interaction between 1,3,2-oxazaphospholanes with different substituents at the P atom and chloral was prompted by the previously reported discovery of strong insecticidal activity of some phosphates prepared by the reaction of dioxaphospholanes with chloral. All reactions were conducted in an ether solution with cooling. The reactions of chloral with 2-diethylamino-N-phenyl-, 2-phenoxy-N-methyl-, 2-ethoxy- or 2-propoxy-N-methyl-, or N-phenyl-1,3,2-oxazaphospholanes, all with only one ester bond in the ring, led, via ring opening, to the formation of, respectively, β, β-dichlorovinyl N,N-diethyl-N',N'-(β-chloroethyl)phenylphosphorodiamidate (I), phenyl, ethyl, or 1/2

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PUDOVIK, A. N., et al, Zhurnal Obshchey Khimii, Vol 41, No 10, 1971, pp 2180-2184

propyl β,β-dichlorovinyl N,N-(β-chloroethyl)methylamidophosphates (II, III, IV), and ethyl or propyl β,β-dichlorovinyl N,N-(β-chloroethyl)phenylamidophosphates (V, VI). In contrast to 1, 3, 2-oxazaphospholanes, the reaction of 2-propoxy-N,N'-di(sec-butyl)-1,3,2-diazaphospholane with chloral proceeds without ring opening. In contrast to dioxaphosphorinanes, 2-alkoxy-1,3,2-oxazaphosphorinanes give with chloral open-chain products, e.g., β,β-dichlorovinyl N-(γ-chloropropyl)amidophosphate with a strong intermolecular hydrogen bond. The structure of the cited reaction products was determined by IR and NMR spectra. The spectra of (III) are given, physical constants and formulas of I-VI compounds are tabulated, and preparation procedures are described. The II-VI compounds exhibited a good fungicidal activity at a sufficiently high toxicity.

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IVANOVA L.K.

Acc. Nr: AT0049897 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: U R 0020

104339v Coupling of reactions resulting from hydrogen transfer through the catalyst. Gryaznov, V. M.; Smirnov, V. S.; Ivanova, L. K.; Mishchenko, A. P. (Univ. Druzhby Nar. im. Lumumby, Moscow, USSR). *Dokl. Akad. Nauk SSSR* 1970, 190(1), 144–7 [Phys Chem] (Russ). A dehydrogenation reaction was performed in a Pd tube (Pd-membrane catalyst) and the evolved H, transported through Pd to the outside, became involved in a hydrogenation reaction with unsatd. hydrocarbons. Dehydrogenation of butene to butadiene took place at 380° on a Pd-membrane catalyst at a rate 2000 times higher than with the reaction performed on the industrial K-16 catalyst at 600°. Stimultaneously with the above dehydrogenation, the transported H was consumed by a hydrogenation of C_6H_6 and, as the result, the dehydrogenation did not give *trans*-2-butene as a byproduct. HMJR

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REEL/FRAME
19801829

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1/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--SERUM PROPHYLAXIS OF MEASLES -U-

AUTHOR-(04)-SHATROV, I.I., MASTYUKOVA, YU.N., IGNATYEVA, G.V., IVANOVA, L.M.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL MIKROBIOLOGII EPIDEIOLOGII I IMMUNOBIOLOGII, 1970, NR 3, PP 120-125

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--PROPHYLAXIS, MEASLES, BLOOD SERUM, GAMMA GLOBULIN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/1477 STEP NO--UR/0016/70/000/003/0120/0125

CIRC ACCESSION NO--AP0109537

UNCLASSIFIED

2/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109537

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ANALYSIS OF THE RESULTS OF STUDYING THE CLINICO EPIDEMIOLOGICAL EFFICACY OF VARIOUS GAMMA GLOBULIN DOSES IN THE FOCI WITH VARIOUS EPIDEMIOLOGICAL CONDITIONS DEMONSTRATED THAT THE EFFICACY OF SERUM PROPHYLAXIS OF MEASLES DEPENDED ON A NUMBER OF FACTORS; THE AGE OF THE CHILDREN VACCINATED AND THE EPIDEMIOLOGICAL SITUATION IN THE FOCUS (THE DURATION OF EXPOSURE TO THE SOURCE OF INFECTION AND THE SEVERITY OF MEASLES IN THE PATIENT) THE DOSE, THE PERIOD OF ADMINISTRATION OF GAMMA-GLOBULIN AFTER THE CONTACT, AND THE CONTENT OF SPECIFIC ANTIBODIES IN IT. THES FACTORS PRODUCED A SIGNIFICANT EFFECT NOR ONLY ON THE EXTENT OF MODIFICATIONOF THE INFECTIOUS PROCESS, BUT ALSO ON THE FORMATION OF SPECIFIC ANTIBODIES IN THE PERSONS VACCINATED. THE DOSE OF GAMMA-GLOBULIN WHICH PRODUCES IN 1 TO 4 YEAR OLD CHILDREN A MITIGATED CORSE OF MEASLES IF THEY CONTRACT THE DISEASE AND AN INTENSIVE DEVELOPMENT OF IMMUNOLOGICAL PROCESSES, IS 1.5 ML.

UNCLASSIFIED

USSR UDC 614.72:615.285.7

SPYNU, Ye. I., IVANOVA, L. N., and BOLOTNYY, A. V., All-Union Institute of Hygiene and Toxicology of Pesticides, Polymers, and Plastics, Kiev

"Pollution of the Environment with Organophosphorus Pesticides"

Moscow, Gigiyena i Sanitariya, No 10, 1973, pp 75-79

Abstract: It is evident from this review of the literature, Soviet and Western, that the extent and duration of pollution of the atmosphere with organophosphorus pesticides depend on the method by which they are applied to the crops, physicochemical properties of the compounds, and climatic conditions and other factors. The degree of persistence of organophosphorus pesticides in plants varies with such physical factors as volatility and solubility in water and organic solvents. The chemical and biological stability of the compounds determine the extent to which they are destroyed by ultraviolet radiation, oxygen and air temperature, and plant enzymes. The method of applying the pesticides, number of applications, rate of expenditure, species of plant treated, etc. are other important factors. The levels of pesticides in soils and their migration vary with the physicochemical properties of the compounds, characteristics of the soil (type, moisture content, pH, microflora, etc.), species of plants growing, and conditions of use.
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USSR UDC 614.7:615.285.7

IVANOVA, L. N., and MOLOZHANOVA, Ye. G., All-Union Scientific Research Institute of the Hygiene and Toxicology of Pesticides, Polymers, and Plastics, Kiev

"The Static and Dynamic Distribution of Sevin in the Environment"

Moscow, Gigiyena i Sanitariya, No 2, Feb 73, pp 24-28

Abstract: Upon treatment with 1.36 kg/ha of 85% wettable sevin powder of 1 ha of an apple orchard at 20-21° and a wind velocity of 1.5 m/sec, experimental data were obtained which were used in the derivation of mathematical relations that describe the static and dynamic distribution of sevin or of a similar insecticide in the environment. The relation between the concentration C on vegetation located at a distance S from the objects treated, on which the concentration was C_r, could be described by the equation $C/C_r = -0.065 + 0.67 \times 1/S \times 10^2$. The dynamics of changes of the concentration of sevin in the air, on the ground and at plant surfaces, and in the apples were determined. The dynamics of disappearance of sevin from the surface layer of soil and from the apples could be described by exponential equations, on the basis of which the time required for the disappearance of the insecticide could be calculated. The concentration C_a

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IVANOVA, L. N., and MOLOZHANOVA, Ye. G., Gigiyena i Sanitariya, No 2, Feb 73, pp 24-28

of sevin in the air adjacent to the soil varied in relation to its concentration C_s in the soil, the temperature T, and the velocity V of air motion according to the equation $C_a/C_s = -0.14 + 0.126 \sqrt{T}/V$. It followed from this equation that in the southern regions of the USSR in hot (T = 38°) and windless weather the maximum permissible concentration of sevin in the air (1 mg/m^3) would be exceeded during the first 12 days after application of this insecticide. According to the relations derived, sevin would disappear from the apples after 34 days. This corresponds pretty closely to the 30 days after application of sevin at the expiration of which fruit are normally harvested.

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USSR UDC 615.917

IVANOVA, L. N.

"Possibility of Using Mathematical Models to Establish the Maximum Allowable Concentrations of Pesticides in a Body of Water"

V sb. Gigiyena primeneniya, toksikol. pestitsidov i klinika otravl. (Hygiene of the Application and Toxicology of Pesticides and the Clinical Aspects of Poisoning -- collection of works), Vyp. 9, Kiev, 1971, pp 83-86 (from RZh-Farmakologiya. Khimioterapevticheskiye sredstva. Toksikologiya, No 2, Feb 72, Abstract No 2.54.764)

Translation: An effort was made to use the system of normal gaussian equations to find the relation between the molecular weight, melting (boiling) point, MPC [maximum permissible concentration] (for hydrobionts) and DL_{50} (for rats).

The correlation coefficient between the toxic effects and the physical-chemical properties of pesticides varied from 0.28 to 0.69, and they were statistically unreliable only for the molecular weight. The model permits an approximate characterization of the toxicity of pesticides.

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USSR UDC 612.014.3:612.6.014.424 4

MAMONTOV, S. G. and IVANOVA, L. N. Chair of General Biology, II Moscow Medical Institute imeni N. I. Pirogov

"The Effect of a Low-Frequency Electric Field on Cell Reproduction in Mice Tissues"

Moscow, Byulleten Eksperimentalnoy Biologii i Meditsiny, Vol 71, No 2, Feb 71, pp 95-96

Abstract: Colcemide (Omain) was intraperitoneally injected into male mice, which were subjected to an electric field with a frequency of 50 Hz. The number of blocked mitoses was counted in the corneal epithelium, liver, and proximal regions of convoluted renal tubules. In the renal tubules no significant shifts in the number of mitoses were observed, but the mitotic index in the corneal epithelium was 2.2 times that in the control, and the mitotic index in the liver was 2.2 times that in the control, and the mitotic index in the liver was 3.4 times that in the control. The data indicate that the passage of cells through the G_2-period is accelerated by application of a low-frequency electric field.

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USSR UDC 666.189.2.:535.8

SATTAROV, D. K., ORLOV, Yu, P., IVANOVA, L. N., IVANOV, V. A.

"The Use of Round Multiple-Strand Light Conductors for the Production of Pressed Optical Fiber Elements"

Leningrad, Optiko-Mekhanicheskaya Promyshlennost', No. 5, 1970, pp 43-46

Abstract: It is shown that round multiple-strand light conductors are suitable for the production of vacuumtight thermally pressed optical-fiber elements with a relatively low uniformity of the optical parameters with respect to the field of the part.

The experiments conducted show that circular multiple-strand light conductors made up of thin (0.3 mm diameter) fibers and having a final diameter of 2-3 mm are preferable.

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USSR

UDC 632.95.028:519.2

IVAKHNENKO, A. G., SPYNU, YE. I., PATRATIY, I. Z., IVANOVA, L. N., All-Union Scientific Research Institute of Hygiene and Toxicology of Pesticides, Polymers and Plastics and the Cybernetics Institute of the Ukrainian SSR Academy of Sciences, Kiev

"Mathematical Forecasting of the Degradation Time of Pesticides in Plants by the Probability Algorithms of the Grouped Argument Method"

Moscow, Gigiyena Sanitariya, No 10, 1972, pp 43-48

Abstract: A study was made of one of the elements of a generalized mathematical model reflecting the multifactor dependence of the process of propagation and disappearance of pesticides in various parts of the environment with indication of forecasting the degradation time of the pesticides in plants. A set of pesticides was divided into classes with respect to duration of their degradation the function of 22 attributes including the physical-chemical properties, parameters characterizing the crop and the conditions of applying the pesticide to it, and also of the meteorological conditions. Three digitalization levels were introduced, and simple recognition formulas were obtained which can be used for manual calculations and to discover the pesticide dynamics in the case of multiple combination of the indicated factor with an accuracy up to 80%. The recognition formula in the logarithmized form appears as follows:

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IVAKHNENKO, A. G., et al., Gigiyena Sanitariya, No 10, 1972, pp 43-48

$$\ln(P_{ai}) = \ln[P(X_1X_{10}/R_i)] = \ln[P(X_2X_3/R_i)] + \ln[P(X_2X_4/R_i)] + \\ + \ln[P(X_3X_4/R_i)] + \ln[P(X_3X_{13}/R_i)] + \ln[P(X_4X_{10}/R_i)] + \\ + \ln[P(X_4X_{19}/R_i)] + \ln[P(X_5X_6/R_i)] + \ln[P(X_6X_{21}/R_i)] + \\ + \ln[P(X_9X_{17}/R_i)] + \ln[P(X_{13}X_{18}/R_i)].$$

where $P(X_kX_\ell/R_i)$ is the probability of the appearance of combinations of attributes in the i-th class. The data indicate that the mathematical models can satisfactorily replace the complex and limited production studies lasting two years and more.

USSR UDC 615.9:632.95]:061.3(47+57)"1971"

IVANOVA, L. N. and SOVA, R. Ye.

"First Symposium on the Use of Mathematical Methods to Assess and Predict the Actual Danger of Pesticides Accumulating in the Environment and in the Body "(14-15 December 1971, Kiev)"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 1, 1973, pp 47-48

Translation: The symposium organized jointly by the Main Sanitary-Epidemiological Administration of the USSR Ministry of Health, All-Union Institute of Hygiene and Toxicology of Pesticides, Polymers, and Plastics (VNIIGINTOKS), and Institute of Cybernetics, Ukrainian Academy of Sciences, was attended by 70 persons representing various scientific institutions in the country: Institute of Industrial Hygiene, USSR Academy of Medical Sciences, Moscow and Leningrad Institutes of Biophysics, USSR Academy of Sciences, Ukrainian Institute of Plant Protection, Ukrainian Institute of Industrial Hygiene, Ukrainian Institute of Communal Hygiene, Kiev Medical Institute, and others.

In his introductory remarks, L. I. Medved' (Kiev), Director of VNIIGINTOKS, discussed the problems resulting from pollution of the environment by pesticides.

The symposium heard and discussed reports on forecasting levels of pesticide accumulation in environmental objects and examined mathematical

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IVANOVA, L. N. and SOVA, R. Ye., Gigiyena Truda i Professional'nyye Zabolevaniya, No 1, 1973, pp 47-48

models showing the migration of chemical substances in some elements of the biosphere.

A great deal of interest was aroused by the paper of Ye. I. Spynu (Kiev) on forecasting the length of time pesticides are stored in plant products. A. G. Ivakhnenko described a mathematical apparatus used in this work (the method of group estimation of arguments, MGUA).

The need for a determined mathematical approach based on a detailed study of the mechanism of the processes, a precise calculation of all the factors that determine these processes, was emphasized in the papers of V. M. Prokhorov (Institute of Agricultural Physics, VASKhNIL [Lenin All-Union Academy of Agricultural Sciences]) and L. N. Ivanova (VNIIGINTOKS).

New approaches to the study of the migration of chemical substances from polymers into water based on mathematical planning of experiments were reflected in the papers of V. O. Sheftel' and Z. S. Tsam (Kiev). K. K. Vrochinskiy (Kiev) used correlation analysis to describe pesticide accumulation in fishes living in polluted water.

The reports of Ye. I. Lyublina (Leningrad) and Yu. S. Kagan, L. M. Sasinovich, and G. I. Ovseyenko (Kiev) described rapid methods of setting hygienic standards.

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USSR

IVANOVA, L. N. and SOVA, R. Ye., Gigiyena Truda i Professional'nyye Zabolevaniya, No 1, 1973, pp 47-48

Many of the papers dealt with the theory and practice of analysis of cumulative properties of various chemical substances.

V. A. Filov gave a mathematical description of the process of accumulation of chemical substances in the body. He noted the possibility of describing the kinetics of physical accumulation of substances in the body as a multicomponent model that can be used to determine the level of accumulation of a substance in different parts of the body at any moment.

I. A. Likhtarev (Leningrad) elicited the lively interest of the symposiasts with his assessment of cumulative doses and relative risk of long-term effects of pesticides. V. A. Khokhlov and A. Ya. Broytman (Leningrad) prepared a mathematical description of the process by which a poison enters the body, becomes distributed, accumulates, and is excreted and neutralized. The description is in the form of equations showing balances between the poison and enzymes.

B. M. Shtabskiy (L'vov) attempted to use the half-life of a substance in the body to describe cumulation. G. N. Krasovskiy et al. (Moscow) discussed the individual approach to the study of cumulative properties using functional tests and plotting effective hour-by-hour curves. On the other hand,

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IVANOVA, L. N. and SOVA, R. Ye., Gigiyena Truda i Professional'nyye Zabolevaniya, No 1, 1973, pp 47-48

R. Ye. Sova, A. P. Mintser, and L. I. Vygovskaya (Kiev) suggested that experimental conditions be standardized for the study of cumulation on the basis of methods they proposed for determining the average lethal dose in a chronic experiment by extrapolation and by integral evaluation of the strength of influence exerted by a substance on the function under study.

A number of papers (V. N. Kudrin and B. M. Shtabskiy, A. I. Olefir et al., G.G. Maksimov, A. P. Mintser, and Ye. N. Levkosskaya) considered various aspects of the use of mathematics in hygiene and toxicology.

I. V. Sanotskiy, S. D. Zaugol'nikov, Ye. I. Lyublina, B. V. Georgiyevskiy, Yu. S. Lapshin, and others took part in a lively discussion on the advantages and disadvantages of using deterministic and probability models for forecasting purposes, their accuracy in describing complex biological processes, economic benefits of forecasting, etc.

The resolution adopted at the symposium proposed that posts be set up for mathematicians on the staffs of head institutes concerned with hygienic problems and that the curriculum of health and hygiene faculties of medical institutes and graduate programs provide for training in mathematics, etc. The next symposium on the use of mathematical methods in hygiene and toxicology is scheduled for 2 years from now.

4/4

1/2 024 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--EFFECT OF LIGHT ON SOLUTIONS OF OPTICAL WHITENING AGENTS -U-

AUTHOR-(04)-DARVINA, V.V., KOLODNER, D.I., IVANOVA, L.S., MAKAROVA, T.P.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VOLOKNA 1970, (2), 55-7

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--PHOTOEFFECT, LUMINESCENCE, UV LIGHT, OPTIC BRIGHTNESS/(U)UFO15 LAMP

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/2009 STEP NO--UR/0183/70/000/002/0055/0057

CIRC ACCESSION NO--AP0125597
UNCLASSIFIED

2/2 028 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0125597

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A.. SOLNS. OF THE FLUORESCENT WHITENING AGENT WHITE S WERE EXPOSED TO DAYLIGHT OR UV IRRADN. (LAMP UFO-15) AND THEIR LUMINESCENCE INTENSITIES WERE DETD. THE DECREASE OF THE LUMINESCENCE INTENSITY WITH TIME DECREASED WITH THE WHITENER CONCN. E.G., SOLNS. CONTG. 0.1 G-L. OF THE WHITENER LOST THEIR LUMINESCENCE AFTER 24 HR WHILE THE LUMINESCENCE OF SOLNS. CONTG. 25.6 G-L. OF THE AGENT WAS UNCHANGED SMALLER THAN OR EQUAL TO 20 DAYS. THE STABILITY OF THE WHITENER WAS HIGHER IN ALK. SOLNS. FACILITY: LENINGRAD. FILIAL, VNIIV, LENINGRAD, USSR.

UNCLASSIFIED

Acc. Nr: AP0051525 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code: UR 0136

102247q Reprocessing of arsenic-containing products at the Severonikel combine. Alekseeva, R. K.; Ivanova, L. S.; Solovov, N. I. (USSR). *Tsvet. Metal.* 1970, 43(1), 17–19 (Russ). The material of anodes in electrolytical refining of Ni metal must be virtually As free, otherwise As contaminates the final product. In the Severonikel metallurgical combine operations most of the As is accumulated in so called irony cake and in dust collected by electroprecipitators. These materials are recycled because of their relatively high content of Ni, Cu, Co, Cd, etc. and, therefore, As should be removed from the cycle. At the same time, water pollution by As must be avoided. Based on lab. expts., a combined process for treating these materials was suggested. The Fe-cake is dissolved in H_2SO_4 and simultaneously SO_2 is introduced to reduce Fe(III). The liquor is deslimed and the filtrate is combined with a clear soln. resulting from the filtration subsequent to the electroprecipitator dust repulped in H_2O leaching. The combined soln. is treated with Cl, air, and $CaCO_3$ and then acidified to pH = 2.6–2.7 (1st pptn.). The filter cake contg. all of the As in the form of insol. Ca arsenates is removed. The filtrate is subjected to 2nd pptn. (CaO or $CaCO_3$, air, and Na_2CO_3 to pH = 7.0–7.2). Both the sepd. solid phase, i.e. a concentrate (3–5% of Ni), and the mother liquor contain virtually no As. V. Dvorak

REEL/FRAME
19811737

USSR UDC 577.1:615.7/9

KOLOSOVA, T. S., TIUNOV, L. A., KUSTOV, V. V., IVANOVA, L. V., VASIL'EV, G. A. LEMESH, G. A., and AKHMATOVA, M. A.

"Toxic Effect of Gaseous Products of the Organism's Vital Activity"

V sb. Probl. kosmich. biol. (Problems in Space Biology -- Collection of Works), Vol 16, Moscow, "Nauka," (Science), 1971, pp 182-190 (Russian) (from RZh-Biologicheskaya Khimiya, No 20, 25 Oct 71, Abstract No 20F1687 from summary)

Translation: Rats were kept for 26 days in metal airtight chambers with automatic O_2 supply and CO_2 excess removal. It was established that the complex of gaseous substances given off by the organism causes lung tissue damage and anemia, increases oxygen consumption and the weight of the thyroid gland, and alters blood catalase activity.

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USSR

UDC: 8.74

BADENKO, L. A., IVANOVA, L. V., KALININ, O. M., KACHURIN, A. L., KOLODYAZHNYY, S. F.

"Analysis of the Motion of Aggregates of Cells in a Fresh-Water Sponge"

V sb. Probl. kibernetiki (Problems of Cybernetics--collection of works), vyp. 25, Moscow, "Nauka", 1972, pp 119-127 (from RZh-Kibernetika, No 6, Jun 72, Abstract No 6V599)

Translation: An attempt is made to find estimates of the principal parameters of cell motions on the basis of mathematical processing of individual trajectories of finite aggregates in a fresh-water sponge. Authors' abstract.

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Acc. Nr: AP0036809 Ref. Code: UR 0016

PRIMARY SOURCE: Zhurnal Mikrobiologii, Epidemiologii, i Immunobiologii, 1970, Nr 1, pp. 12-18

CONCERNING PATHOGENESIS OF TYPHOID-PARATYPHOID CARRIER STATE

A. F. Bilibin, V. D. Timakov, V. M. Bondarenko, L. V. Ivanova

A study was made of the process of interaction of intracellular forms of typhoid-paratyphoid bacilli with the bone marrow cells of the patients and carriers. Bone marrow was obtained by trephine-biopsy of the ileum and cultivation in vitro in special chambers of MBI-12 microscope. Primary puncture material, cellular detritus and cultural fluid were examined bacteriologically for confirmation of specificity of the process and of the changes recorded in the cells under study in the bone marrow cultures. Investigations were carried out according to the scheme of analysis for isolation of bacterial and L-forms of the causative agent. A method of phasic-contrast microscopy in combination with fluorescent-serological method was used in this work. Bone marrow proved to be nonsterile in 13 of 20 patients and

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carriers examined. Amorphological picture of the bone marrow of chronic carriers was characterized by the presence of a great number of macrophagic elements, infected in a number of cases by forms of the causative agent differing in morphological properties. The identified myelostrains were represented by 3 typical typhoid cultures, 4 stable L-forms and 6 mixed cultures of typhoid-paratyphoid bacilli. Cells affected by these bacilli usually perished by the end of the 5th—8th day of bone marrow incubation; as to the uninfected bone-marrow elements, they formed a cellular unistratum, in individual cases remaining viable for 58 to 60 days. Experimental results lead to a supposition that chronic typhoid-paratyphoid carrier state is a general process, in which a definite role is played by bone marrow.

D.N.

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19721726

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UDC 621.384.6

ABRAMOV, V. A. and IVANOVA, L. YE.

"Determination of the Concentration of Charged Particles in a Pulsed Electromagnetic Accelerator"

Minsk, Zhurnal Prikladnoy Spektroskopii, Vol 15, No 3, Sep 71, pp 405-409

Abstract: The authors determine the concentration of electrons in a pulsed electromagnetic accelerator on the basis of the guadratic Stark effect. For a series of lines of the elements AlIII, FII, and CII they compute the constant quadratic Stark effect with an approximation of one perturbed level. They evaluate the accuracy of the formula suggested. Two models of an accelerator are investigated. The voltage on the capacitor bank is 5 kV, the current strength is at a maximum of 500 kA, and the characteristic time of the discharge is 40μsec. The diameter of the outer electrode is 6 cm and that of the inner electrode is 2 cm for both models. The length of the electrodes of the model is I- ℓ = 27 cm, II- ℓ = 4 cm. For model I the authors obtained a time-averaged value of n_e for a series of points inside and outside the model. The maximal value of n_e is reached on the axis of the stream at a distance of 6 cm from the cut and is equal to $(7\text{-}9)\cdot10^{15}$ cm^{-3}. The maximum of n_e,

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ABRAMOV, V. A. and IVANOVA, L. Ye., Zhurnal Prikladnoy Spektroskopii, Vol 15, No 3, Sep 71, pp 405-409

obtained according to the time bases, is reached directly at the maximum of the current and is $(6-8)\cdot10^{15}$ cm^{-3} for the first model and $(6-7)\cdot10^{16}$ cm^{-3} for the second. The article contains 4 illustrations and 9 bibliographic entries.

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USSR

UDC 614.715(-21)-037

DMITRIYEV, M. T., IVANOVA, L. Yu., and CHON EN DE, Institute of General and Communal Hygiene imeni A. N. Sysin, Academy of Medical Sciences USSR, Moscow, and State University imeni M. V. Lomonosov, Moscow

"Hygienic Prognosis of Photochemical Smog Formation in Cities"

Moscow, Gigiyena i Sanitariya, No 2, Feb 73, pp 8-13

Abstract: UV radiation at wavelengths of 320-330 nm plays the most important role in the formation of photochemical smog in the air. An equation for the rate of formation of photooxidants in the air calculated as O_3 was derived in earlier work by Dmitriyev et al (Gig. i San., No 10, p 6, 1971). By using this equation and estimating the amount of effective UV radiation under consideration of direct and scattered radiation as well as of UV radiation absorbed by O_3 in the stratosphere, the rate of formation of photooxidants and of photochemical smog in 17 USSR cities located at various latitudes ranging from 69.1°N (Murmansk) to 38.0°N (Ashkhabad) could be calculated (table). The assumption was made that the principal source of atmospheric pollution was formed by automative exhaust gases in an amount corresponding to a CO concentration of 100 mg/m^3 in the air. Curves were obtained which

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DMITRIYEV, M. T., et al., Gigiyena i Sanitariya, No 2, Feb 73, pp 8-13

indicated that the maximum rate of photochemical reactions that determine the formation of smog must be at noon hours in June in northern USSR cities and in Jul-Aug in southern USSR cities. It is pointed out that if the existing USSR requirements for the maximum concentrations of pollutants in the air that should not be exceeded are fulfilled, photochemical smog cannot form. At a concentration of automotive exhaust gases corresponding to /CO/ = 1 mg/m^3 and /NO_2/ = 0.085 mg/m^3, /hydrocarbons/ = 3 mg/m^3, the maximum rate of photochemical reactions at noon even in the southernmost cities of the USSR does not exceed 0.018 mg/m^3.hr, which is 20 times lower than that at which a photochemical smog may still form.

USSR

UDC 621.538.669

SHVETS, T. M., IVANOVA, L. YU., MEL'NICHENKO, Z. M., MISHCHENKO, E. G., and NATANSON, E. M., (DECEASED), Institute of Colloidal and Water Chemistry, AN Ukr SSR

"Magnetic Properties of Highly Disperse Iron-Cobalt-Nickel Alloy Powders"

Kiev, Akademiya Nauk Ukr SSR, Poroshkovaya Metallurgiya, No 7, Jun 72, pp 71-75

Abstract: Experimental results of a study of the effect of various electrolysis parameters (electrolyte concentration and acidity, cathode current density, cathode material, and the presence of additives) and of the alloy composition on the magnetic properties of highly disperse ternary iron-cobalt-nickel alloys are presented. The analysis shows that the most significant effect on the magnetic properties is produced by electrolyte concentration. Thus, by increasing concentration from 50 to 500 gr/l (iron, cobalt, and nickel chlorides) the coercive force drops from 800 to 300 oe, and this is related to significant coarsening of alloy particles.

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USSR

UDC 543.251:669.017.1

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SHVETS, T. M., MEL'NICHENKO, Z. M., VASILENKO, V. P., IVANOVA, L. YU., and NATANSON, E. M., Institute of Colloidal Chemistry and Water Chemistry, Academy of Sciences Ukrainian SSR

"Effect of Additives on the Electrodeposition of Iron-Cobalt-Nickel Ternary Alloys"

Kiev, Poroshkovaya metallurgiya, No 3, 1972, pp 12-17

Abstract: Cited are the experimental results of a study of the effects of various additives (both inert and surface-active compounds) on the electrodeposition of highly dispersed layers of Fe-Co-Ni alloys, their structure, and the size and shape of the particles formed in the double-layer bath. Measurements of the magnetic properties of the highly dispersed Fe-Co-Ni alloy powders produced in the presence of additives indicate the coercive force to be slightly lower in all cases; the residual remanence increases due to the high dispersity and the marked anisotropy of the shape. The study shows the potential changes in the structure of the deposit as a function of one electrodeposition additive on another. (2 illustrations, 2 tables, 5 bibliographic references)

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Heat Treatment

USSR

UDC 621.791.053.011:621.78:669.14.018.8

RAZIKOV, M. I., Doctor of Technical Sciences, POSPELOV, N. G., Engineer, SAMOYLOV, M. I., and BERESNEV, G. A., Candidates of Technical Sciences, and IVANOVA, M. A., Engineer

"Search for Optimum Heat Treatment Modes for N18K9M5T Steel Weld Joints"

Moscow, Svarochnoye Proizvodstvo, No 8, Aug 73, pp 13-16

Abstract: Results are presented from a study of grain growth in the heat-affected zone and the presence of the amount of weak stable austenite, enriched with titanium and molybdenum, in the weld joint of thin-sheet N18K9M5T maraging steel with a chemical composition (in %): 18.35 Ni, 8.75 Co, 5.1 Mo, 0.72 Ti, 0.015 C, 0.03 Si, 0.03 Mn, 0.003, S, 0.003 P, 0.02 Al. Weld samples were subjected to conventional heat treatment of heating to 810-830°C for 20 minutes, air cooling, aging at 475-485°C for four hours and air cooled, and a repeated heating treatment of 980-1000°C for 5-10 seconds, done 3-5 times with a heating rate of 100-300°C/sec. Analysis of mechanical tests (impact strength, tensile strength, rupture strength, etc.) showed that the repeated heating method yields properties 15-20% higher than for samples conventionally heat treated. Nine figures, two tables, 12 bibliographic references.

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USSR

UDC 534.322.3+534.83

BALITSKIY, F. YA., GENKIN, M. D., IVANOVA, M. A., SOKOLOVA, A. G.

"Problems of Modelling Acoustical Processes in Machines"

V sb. Dinamika i akustika mashin (Machine Dynamics and Acoustics -- Collection of Works), Moscow, "Nauka", 1971, pp 89-97 (from RZh-Fizika, No 3, Mar 72, Abstract No 3Zh503)

Translation: The problem of the acoustical diagnostics of gear trains -- in this case, of establishing a one-to-one correspondence between the state parameters (the gap and load) and the parameters of the vibration-acoustical signal -- is considered. The various states of the planetary reducer were modeled by establishing the different degrees of side play in gear in the range 0-0.3 mm. The spectral components of the vibration, the correlation function, and the differential range of the distribution of instantaneous values were studied as a function of the gap and load. A characteristic increase in the dispersion of the distribution function with the increase of these parameters was observed and studied. Authors abstract.

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USSR

UDC: 537.311.33:546.19'681

STUKEN, I. B., KARTASHEVA, I. A., IVANOVA, M. A.

"Change in the Electrical Properties of Gallium Arsenide With Beryllium Diffusion"

V sb. Raschety radiotekhn. skhem i proyektir. radioapparatury (Calculations of Radio Circuits and Design of Radio Equipment--collection of works), Omsk, 1970, pp 109-111 (from RZh-Elektronika i yeye Primeneniye, No 6, Jun 71, Abstract No 6B52)

Translation: It is demonstrated that beryllium is an acceptor impurity in gallium arsenide. Beryllium was introduced into specimens of GaAs of type N ($N = 5 \cdot 10^{17}$/cc and $7 \cdot 10^{17}$/cc) by diffusion (depth of the PN junction was 12-30 microns). The surface conductivity σ and the Hall effect were measured in the initial specimens and in the specimens after beryllium diffusion. In specimens with initial concentration $N = 5 \cdot 10^{17}$/cc, the shallow acceptor level with activation energy of ~0.04 eV was determined from the relation $\log V_x = f(1/T)$; this level is due to beryllium. Bibliography of 3 titles. M. D.

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1/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70
TITLE--EFFECT OF COBALT ON NITRATE REDUCTASE ACTIVITY IN LEGUMES -U-

AUTHOR-(04)-YAGODIN, B.A., OVCHARENKO, G.A., VASILYEVA, YU.V., IVANOVA, M.A.
COUNTRY OF INFO--USSR

SOURCE--SEL SKOKHOZ. BIOL. 1970, 5(1), 134-6

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--LEGUME CROP, NITRATE, ENZYME ACTIVITY, COBALT COMPOUND, PLANT PHYSIOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3007/2012 STEP NO--UR/9062/70/005/001/0134/0136

CIRC ACCESSION NO--AP0133197
UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--04DEC70
CIRC ACCESSION NO--AP0137187
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. COBALT STIMULATES THE NITRATE REDUCTASE ACTIVITY IN THE LEAVES AND NODULES OF LEGUMES. APPLICATION OF TOXIC AMTS. CAUSES CHLOROSIS AND A DECREASE IN ENZYMIC ACTIVITY. CO APPEARS TO ACT AS AN ACTIVATOR FOR NITRATE REDUCTASE. FACILITY: INST. FIZIOL. RAST. IM. TIMIRYAZEVA, MOSCOW, USSR.

UNCLASSIFIED

USSR UDC:669.293

IVANOVA, M. I., ELYUTIN, A. V.

"Behavior of Impurities in Niobium During Vacuum Smelting"

Moscow, Tsvetnyye Metally, No. 11, Nov 70, pp. 48-51

Abstract: Vacuum smelting of refractory metals and in particular electron beam melting of metals have become widely used in recent years. There is considerable interest in the selection of criteria for the behavior of impurities in the process of vacuum smelting. A distribution coefficient is suggested, which is a refinement of the earliest distribution coefficient, calculated as the ratio of concentrations of the impurity in the melt and in the gas phase. Experimental results have confirmed the correctness of the calculation formula. The experimental results can be used to calculate the composition of charge materials for electron beam smelting of niobium-based alloys.

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1/2 019 UNCLASSIFIED PROCESSING DATE--30OCT7(

TITLE--ADDITION REACTICNS OCCURRING AT THE DOUBLE BOND OF DELTA PRIME2 DIHYDROTHIOPYRAN -U-

AUTHOR-(04)-BLAGOVESHCHENSKIY, V.S., KAZIMIRCHIK, I.V., IVANOVA, M.I., ZEFIROV, N.S.

CCUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(4), 877-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CONDENSATION REACTION, THIOL, HETEROCYCLIC OXYGEN COMPOUND, PHOSPHORUS SULFIDE, ORGANIC SYNTHESIS, ORGANIC SULFUR COMPOUND, ORGANIC PHOSPHORUS COMPOUND, PESTICIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2067 STEP NO--UR/0366/70/006/004/0877/0879

CIRC ACCESSION NO--AP0125654

UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--30OCT7C
CIRC ACCESSICN NO--AP0125654
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CONDENSATION OF DELTA PRIME2 DIHYDROTHIOPYRAN (I) WITH ALCS. IN ET SUB2 O SOLN. CONTG. HCL GAVE 2(OR 3),R,SUBSTITUTED,TETRA, HYDROPYRANS (II) (R IS OME, OBU). SIMILARLY, TREATING I WITH BUSH GAVE II (R EQUALS SBU). I WITH DIALKYL DITHIOPHOSPHATES GAVE II (R IS SP(:S)(OME) SUB2 OR SP(:S)(OET) SUB2). THE REACTIONS OF I WITH TETRA-ET BISTHIOPHOSPHATE GAVE 2,4,3,R PRIME1,DI, SUBSTITUTED,TETRAHYDROPYRAN (III) (R AND R PRIME1 ARE SP(:O)(OET) SUB2). SIMILARLY, I REACTED WITH HG(OAC) SUB2 IN MEOH TO GIVE III (R EQUALS OME, R PRIME1 EQUALS HGOAC), WHICH WAS CONVERTED INTO III (R EQUALS OME, R PRIME1 EQUALS HGCL). II AND III ARE POTENTIAL PESTICIDES. FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201120018-4"

USSR

UDC: 621.396.69:621.319.4

IVANOVA, M. P., MIKHAYLOVA, I. P., PLAVNIK, Z. S.

"Effect of Electrode Metal on the Properties of Monolithic Ceramic Capacitors"

Elektron. tekhnika. Nauchno-tekhn. sb. Radiodetali (Electronic Technology. Scientific and Technical Collection. Radio Components), 1970, vyp. 1 (18), pp 3-13 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V350)

Translation: Data are given on the technological singularities of electrical properties and the structure of the dielectric of blanks for monolithic ceramic capacitors with silver-doped palladium and platinum electrodes. Bibliography of 4 titles. Ye. M.

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USSR

IVANOVA, N., Special Correspondent

"Responsible for Everyone"

Moscow, Meditsinskaya Gazeta, 20 Dec 72, p 2

Translation: Praskov'ya Mironovna Goliusova known this city and its every nook life the palm of her hand, and every morning as she hurries to work she senses happiness for what she sees. The streets of Pushkino have become broad, clean, and green, multistory buildings found in cities have sprouted, and lightcolored towers of the new residential complex peer into the water of the Serebryanka River. All of this grew up before her eyes. Praskov'ya Mironovna has been with the local health service since 1956 and has acted as its director for the last decade. Thus she has had a direct relationship with the changes that have occurred. This is probably why the people decided she should hold responsibility for the city in their behalf. Praskov'ya Mironovna maintains this responsibility not only as the chief public health specialist but also as a representative to the city council.

The history of the health service in the rayon is intimately connected with the rayon's development, economy, and all changes that have occurred. The "chief" is well aware of the rayon's business. There is wood processing, textile, and local industry. The rayon's farms provide the capital with

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IVANOVA, N., Meditsinskaya Gazeta, 20 Dec 72, p 2

milk, vegetables, meat, and fruits. Pedigreed cattle are raised. There is even an animal-raising sovkhoz known throughout the country for its Pushkin mink, a welcome guest at international auctions. Such diversity complicates the work of the health inspectorate. But difficulties do not scare Praskov'ya Mironova and her colleagues. They have made the work interesting and creative. Her own concepts have changed. Being in the service 16 years, the chief still remembers how public health specialists used to deal with "toilet hygiene," and any voice with a hint of authority could have said "What is this, doctor, why is Polevaya Street dirty" over the phone. Yes, this is true! This is what some people imagined to be the function of the health service.

Such a state of affairs has long been at an end. Now everyone in the rayon is aware of the rights and responsibilities of the health service. And even the most wordly and terrifying kolkhoz chairmen fear calls from the sanitary-epidemiological station in case of violation of some sanitation standard.

The city party committee and executive committee constantly assess problems of public health expertise and are acquainted with such matters to no lesser a degree than is Praskov'ya Mironovna with the affairs of the rayon. And occasionally they are quite exacting.

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USSR

IVANOVA, N., Meditsinskaya Gazeta, 20 Dec 72, p 2

Now the sanitary-epidemiological station is responsible for the health of the air, rivers, and soil in the rayon, for the purity of milk from the farms, for sensible and competent use of toxic chemicals, and for the people's living and working conditions. The sanitary-epidemiological station's new, spacious building -- the pride of its whole collective -- contains outstandingly equipped laboratories in which all of this can be done at a high scientific level. And precisely scientific. Today the word "science" is solidly entrenched in the vocabulary of the station's colleagues. It participates in research being conducted by scientists from its parent Institute of Epidemiology, from the Institute of Social Hygiene, and from the Public Health Organization imeni N. A. Semashko. Specialists of the sanitary-epidemiological station are in the mainstream of the latest scientific and practical achievements: It is no accident that abstracts of specialized journals have become normally available here.

It is not the inspector, the overseer with his fines, acts and sentences to be used as his whip, but rather the erudite specialist, the true physician who scientifically justifies his demands that is the star of the health inspectorate today. This is what Praskov'ya Mironovna feels. This is what is taught to the young workers primarily. This is probably why everyone, irrespective of age, time of service, and station is quick to

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USSR

IVANOVA, N., Meditsinskaya Gazeta, 20 Dec 72, p 2

respond if the thought of going somewhere to learn comes up. The comrades willingly assume additional responsibilities because they know that sooner or later each one of them is going to have to study. Last year five of the 21 physicians attended refresher institutes! And this is the case each year. Three intermediate medics are getting ready to enroll in institutions of higher education, and they will return to the station with physicians' diplomas. This is quite all right: Their comrades will wait for them.

A spirit of inquiry and creativity is especially sensed in the movement toward a communist attitude toward labor, in which all of the station's colleagues are participating. Two thirds of them have become the vanguard of this movement. This is not the limit of course. Great labor obligations have been assumed here in honor of the 50th anniversary of the USSR. Their satisfaction will undoubtedly increase the number of people with an attitude toward labor that we pridefully call communist. Here is something else about the collective's obligations: We can learn about all of the nine points in the obligations by looking at a stand in the station's main hallway. But Raisa Ivanovna Tkachenko, the chairman of the local committee, holds folders containing descriptions of the personal obligations of every individual in honor of the great holiday of the Soviet people. The fact is that we do not have people of different nationalities laboring side by side here, as reporters

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frequently find. These people from a small town in the Moscow vicinity simply sense their participation in the country's great achievements constantly and are ready to make their mark in the common good to the extent that their strength and capabilities would allow. Vera Filippovna Bondareva, the station's senior associate and an assistant to the public health specialist (the 40th anniversary of her activity here will be celebrated in December) for example has obligated herself to studying the condition of all wells in the village Zvyagino. There are 32 of them. A certificate must be drawn up for each of them, and a village water supply map must be compiled. This is necessary for subsequent construction of a water pipeline. Vera Filippovna is not alone. Anna Sergeyevna Belyayeva, chairman of the council of doctors' assistants, Roza Aleksandrovna Mkrtchan, member of the station party bureau, Vera Ivanovna Gryaznova, who chairs the division of communist labor, and all the rest of them will also be reporting on their achievement in December.

If we add it all together, we see that there is quite a lot. But what is most important is that the life and labor of the people will become easier, healthier, and more comfortable. This is the purpose Praskov'ya Mironovna Goliusova and her colleagues see in their difficult work.

5/5

- end -

USSR UDC 616.988.75-036.22-078"1969"

SMORODINTSEV, A. A., LUZYANINA, T. Ya., IVANOVA, N. A., and GRINBAUM, Ye. B., All Union Scientific Research Institute of Influenza, Ministry of Health USSR

"Characteristics of Influenza A2 Virus Strains Isolated During the 1969 Epidemic in Leningrad"

Moscow, Voprosy Virusologii, No 5, Sep/Oct 70, pp 601-605

Abstract: The influenza epidemic in the winter of 1969 in Leningrad resulted from the spread of a new antigenic variant of the Hong Kong A2 virus. The distinctive feature of the Hong Kong A2 strains is their capacity to multiply intensively in the allantoic and amniotic cavities of chick embryos. On the basis of this characteristic, an unusually high isolation rate of epidemic strains from patients was obtained. The A2-69 viruses differ in this respect from the A2 viruses circulating previously, the isolation of which has presented increasing difficulties since 1962. Another typical feature of the newly isolated strains is their pronounced antigenic difference from the earlier A2-1 and A2-2 variants. This sharp deviation in the antigenic structure of Hong Kong A2 influenza virus was confirmed by the absence of antibodies for the new variant in the Leningrad population under 60 years of age.
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SMORODINTSEV, A. A., et al, Voprosy Virusologii, No 5, Sep/Oct 70, pp 601-605

This factor led to the rapid involvement of both children and adults in the epidemic process.

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1/2 009 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--PHOTOSYNTHETIC FUNCTION OF POTATO LEAVES IN AUTONOMOUS AND SYSTEM CONDITIONS -U-

AUTHOR-(02)-MOKRONOSOV, A.T., IVANOVA, N.A.

COUNTRY OF INFO--USSR

SOURCE--FIZIOLOGIYA RASTENIY, 1970, VOL 17, NR 2, PP 265-273

DATE PUBLISHED--------70

SUBJECT AREAS--AGRICULTURE

TOPIC TAGS--PHOTOSYNTHESIS, PLANT PHYSIOLOGY, METABOLISM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1982/1585 STEP NO--UR/0326/70/017/002/0265/0273

CIRC ACCESSION NO--AP0052784

UNCLASSIFIED

2/2 009 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0052784

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE KINETICS OF PHOTOSYNTHETIC METABOLISM BY THE C PRIME14 O SUB2 "GULP" TECHNIQUE WITH SUBSEQUENT EXPOSURE IN LIGHT IN ORDINARY ATMOSPHERE AND ALSO BY THE TECHNIQUE OF INCREASING EXPOSURE OF THE LEAF IN C PRIME14 O SUB2 WAS INVESTIGATED IN POTATO LEAVES UNDETACHED FROM THE PLANT ("LEAF IN THE SYSTEM") OR DETACHED FROM THE PLANT ("AUTONOMOUS LEAF") DIRECTLY BEFORE THE EXPERIMENT, OR A DAY BEFORE. WATER CONDITIONS IN THE DETACHED LEAVES WERE CLOSE TO THOSE EXISITING IN THE CONTROL PLANTS. SIGNIFICANT DIFFERENCES IN THE KINETIC CHARACTERISTICS OF PHOTOSYNTHETIC METABOLISM IN DETACHED AND UNDETACHED LEAVES WERE OBSERVED EVEN WHEN THE CO SUB2 FIXATION RATES WERE ABOUT THE SAME. THE CARBOHYDRATE CHANNEL OF PHOTOSYNTHESIS IS INHIBITED WHEN THE LEAVES ARE CUT FROM 3-10 AND 55-65 DAY OLD PLANTS AND IT IS GREATER IN 15-55 DAY OLD PLANTS. TRANSFORMATION OF PHOSPHOHEXOSE INTO SUCROSE IS ACCELERATED DIRECTLY AFTER DETACHMENT, AND AFTER A DAY STARCH SYNTHESIS IS PREDOMINANT, PARTICULARLY IN OLD PLANTS. DETACHMENT OF THE LEAVE APPRECIABLY LOWERS INCORPORATION OF C PRIME14 INTO GLYCERATE AND ACCELERATES THE FORMATION OF SERINE AND GLYCINE. THE VARIATIONS IN PHOTOSYNTHESIS IMMEDIATELY AFTER DETACHMENT REFLECT TRANSITION PHENOMENA, AND AFTER A DAY, THE STATE OF THE PHOTOSYNTHETIC METABOLISM UNDER AUTONOMOUS CONDITIONS WHEN THE SYSTEM OF COOPERATIVE COUPLING BETWEEN THE LEAF AND WHOLE PLANT IS REMOVED.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201120018-4"

1/2 019 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--SELF HEALING OF CRACKS IN POLYMERS. I. EFFECT OF TEMPERATURE AND CROSSLINKS ON THE SELF HEALING OF CRACKS IN POLY,VINYL ACETATE -U-
AUTHOR-(04)-MALINSKIY, YU.M., PROKOPENKO, V.V., IVANOVA, N.A., KARGIN, V.A.
COUNTRY OF INFO--USSR

SOURCE--MEKH. POLIM. 1970, 6(2), 271-5

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--POLYVINYL ACETATE, THERMAL EFFECT, POLYMER CROSSLINKING, TRANSITION TEMPERATURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/0914 STEP NO--UR/0374/70/006/002/0271/0275

CIRC ACCESSION NO--AP0134643
UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--27NOV70
CIRC ACCESSION NO--AP0134643
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. UNSTRESSED POLY(VINYL ACETATE) (I) UNDERWENT RAPID SELF HEALING AT THE APEX OF THE CRACKS AT TEMPS. CLOSE TO THE GLASS TRANSITION TEMP. AND FLOW POINT (T SUB1). THE EFFECT OF I CROSSLINKING ON THE "REST" COEFF. (BETA) SUGGESTED THAT THE RAPID INCREASE IN BETA AND T SUB1 WAS DUE TO ENHANCED DIFFUSION AND RELAXATION. CROSSLINKING OF I LOWERED BETA AND THE TEMP. AT WHICH MAX. SELF HEALING OCCURRED. THE HIGHLY ELASTIC AND PLASTIC MECHANISMS OF SELF HEALING WERE DISCUSSED. FACILITY: NAUCH.-ISSLED. FIZ-KHIM. INST. IM. KARPOVA, MOSCOW, USSR.

UNCLASSIFIED

1/2 012 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--FORMATION OF COKE IN STATIONARY AND FLUIDIZED BEDS OF AN ALUMINA, CHROMIA, POTASSIA CATALYST DURING N HEPTANE DEHYDROCYCLIZATION -U-
AUTHOR-(05)-NOVIKOVA, L.A., IVANOVA, N.G., KOZENGART, M.I., KONONOV, N.F., MEDVEDOVSKAYA, I.I.
COUNTRY OF INFO--USSR

SOURCE--NEFTEKHIMIYA 1970, 10(1), 37-41.

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--COKE, FLUIDIZED BED, ALUMINA, CHROMIUM OXIDE, POTASSIUM OXIDE, CATALYST ACTIVITY, CYCLIZATION, HEPTANE, AROMATIC HYDROCARBON/(U)KA237 CATALYST

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/2101 STEP NO--UR/0204/70/010/001/0037/0041

CIRC ACCESSION NO--AP0125685
UNCLASSIFIED

2/2 012 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AP0125685
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INCREASED COKE FORMATION DUE TO INCREASED CONTACT TIME AND TEMP. IN A STATIONARY BED OF 2.9 TIMES 2.2 MM PARTICLES OF AL,CR,K OXIDE CATALYST KA,237 WAS ABOUT THE SAME AS THAT IN A FLUIDIZED BED OF 63-84 MU PARTICLES OF THE SAME CATALYST DURING DEHYDROCYCLIZATION OF N HEPTANE (I) AT 510-40 AND 510-50DEGREES, RESP., BUT THE INCREASE WAS NONLINEAR IN THE CASE OF THE STATIONARY CATALYST LAYER. COKE DEPOSITS DECREASED MONOTONICALLY THROUGH THE LATTER BUT WERE EVENLY DISTRIBUTED IN THE FLUIDIZED BED. AT 510DEGREES AND AN INPUT RATE OF SIMILAR TO 0.5 HR PRIMENEGATIVE1 WHEN THE COKE YIELD WAS 1.2PERCENT, AROMATIC HYDROCARBON YEILDS INCREASED FROM 41.9 TO 63.2 AND 65.1PERCENT AS THE LENGTH OF THE RUN WAS RAISED FROM 1 TO 2 AND 3 HR, BUT WHEN A HEPTANE FRACTION (31.4PERCENT N HEPTANE, 46.4PERCENT OTHER ALKANES, 21.2PERCENT ISOHEPTANES, 17.2PERCENT NAPHTHENES, AND 5PERCENT AROMATIC HYDROCARBONS) WAS SUBSTITUTED AND THE COKE YIELD WAS 5.1PERCENT, AROMATIC HYDROCARBON YIELDS DECREASED FROM 24.9 TO 18.5 AND 15.6PERCENT. AT 548DEGREES, WHEN COKE YIELDS WERE 1.9 AND 8.6PERCENT, AROMATIC HYDROCARBON YIELDS FROM RUNS OF THE RESP. LENGTHS WERE 69.9, 69.0, AND 70.5PERCENT FOR I AND 44.9, 33.9, AND 18.0) FOR THE HEPTANE FRACTION. REDUCED CATALYTIC ACTIVITY WAS MARKED ONLY FOR A COKE CONTENT IS GREATER THAN OR EQUAL TO 8PERCENT. FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 615.31:547.722.6].012.1.015.11

SKVORTSOV, I. M., BUNTYAKOVA, N. A., STOLYARCHUK, A. A., and IVANOVA, N. I., Saratov University imeni N. G. Chernyshevskiy and Vinnitsa Medical Institute imeni N. I. Pirogov

"Synthesis of 1-(furyl-2')- and 1-(5'-methylfuryl-2')-2-dimethylaminoethanes and Some Pharmacological Properties of the Hydrochlorides and Quaternary Salts Derived From Them"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, No 8, 1972, pp 14-17

Abstract: A continuation of an earlier work describing the synthesis of amines like 1-(furyl-2')-3-dimethylaminopropane is presented. The relationship between the structure of the quaternary salts and hydrochlorides, derivatives of tertiary furan amines, and their pharmacological properties are discussed. In experiments on mice, all eight compounds studied briefly dilated the pupils, lowered blood pressure, and slowed the coronary blood flow. Thus, the compounds possess M-cholinomimetic activity manifested selectively against the peripheral or central cholinoreactive structures.

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USSR

002.513.5;631.322-523.8

KERIMOV, S. K., IVANOVA, N. I.

"Machine Realization of the 'Argon-1' Information Retrieval System"

Moscow, Nauchno-Tekhnicheskaya Informatsiya, No. 3, 1970, pp 25-27.

Abstract: Earlier works have presented detailed descriptions of an information retrieval language for chemistry and chemical technology, used in the "Argon-1" information retrieval system, designed to be run on the Minsk-22 computer. This article presents a description of the practical procedure of machine realization of this system. The organization of the accumulation and storage of information in external computer memory is described. A flow chart of the program for supplementation of the list of descriptors in machine memory is presented, along with a description and flow chart of the retrieval algorithm. Search can be performed for several requests simultaneously.

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USSR

UDC 547.26'118

IVANOVA, N. L., ZAVALISHINA, A. I., FURSENKO, I. V., NASONOVSKIY, I. S., KONYAYEVA, I. P., KOMLEV, I. V., NIFANT'YEV, E. YE.

"Chromatography of Organic Compounds of Trivalent Phosphorus in a Thin Sorbent Layer. II"

Leningrad, Zhurnal Obshchey Khimii, Vol XLII (CIV), No 1, 1972, pp 91-93

Abstract: Some acids of phosphorus and their esters can be identified by the method of thin layer chromatography, but the chromatograms of such substances are not always sufficiently clear and the method of thin layer chromatography was not successful heretofore for analysis of the amides and other important types of derivatives of the acids of trivalent phosphorus [E. Ye. Nifant'yev, ZhOKh, No 35, 1980, 1965]. Here, a more detailed study has been made of the conditions of thin-layer chromatography of some of the most useful types of substances of this class. As a rule, aluminum oxide of second degree Brockman activity was used as the sorbent, but silica gel, polyvinyl alcohol and chlorated polyethylenes were also investigated. They gave worse results. The presented method of thin layer chromatography proved to be useful for analysis of medium and acid phosphites, thiophosphites, amides of phosphoric acid and amidophosphites and esters of hypodiphosphoric acid.

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USSR

UDC 538.27:547.26'118

NIFANT'EV, E. E., IVANOVA, N. L., BORISENKO, A. A. Moscow State University imeni M. V. Lomonosov

"Application of NMR Spectroscopy to the Study of Alcoholysis of the Amides of Trivalent Phosphorus Acids"

Leningrad, Zhurnal Obschei Khimii, Vol 40, No 6, Jun 70, pp 1420

Abstract: NMR spectroscopy was applied to the P^{31} nucleus in a study of the alcoholysis of phosphoamides. It was established that triamides of phosphorous acid are more readily alcoholyzed than the amidoesters. The catalytic effect of amine hydrochlorides on the rate of substitution reactions could be confirmed by NMR. In the case of the alcoholysis of the dimethylamide of 1,3-butylenephosphorous acid, stereospeciticity of the substitution reaction the ring phosphorus atom was observed.

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USSR

UDC 547.26'118

NIFANT'EV, E. Ye., IVANOVA, N. L., GUDKOVA, I. P., SHILOV, I. V. Moscow State University imeni M. V. Lomonosov

"Acid Catalysis in the Reaction of Amides of Trivalent Phosphorus Acids with Mercaptans and Carbonyl Compounds"

Leningrad, Zhurnal Obshcei Khimii, Vol 40, No 6, Jun 70, pp 1420-1421

Abstract: Phosphorus acid amides (I) readily react with aliphatic mercaptans in the presence of acetic acid, yielding thiol esters. Carboxylation of I takes place only in the presence of acidic compounds. It is possible that this mechanism involves initial protonation of the P atom. Our previously proposed mechanism for the formation of α-aminophosphonates involving only the amidophosphite and an aldehyde does not agree with the experimental data. It is probable that also in this case, the mechanism is based on a preliminary protonation step.

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USSR

UDC 547.26'118

NIFANT'YEV, E. YE., and IVANOVA, N. L., Moscow State University imeni M. V. Lomonosov

"Haloalkylates of Phosphorous Acid Amides. Structure, Study of Alcoholysis"

Leningrad, Zhurnal Obshchey Khimii, Vol 40, No 7, Jul 70, pp 1492-1496

Abstract: The phosphonium salts obtained by alkylation of hexaalkyltriamides of phosphorous acid with methyl iodide do not undergo hydrolysis or alcoholysis. A study of the alkylation of the phosphorous acid amides with alkyl halides shows that the formation of ammonium salts in this reaction may take place as a result of secondary processes rather than direct N-alkylation.

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